Transition plan sustainable travel policy 2020-2030

1. GENERAL FRAMEWORK

On 11 September 2020, the Board of Directors took the opportunity of the request to declare a state of climate emergency to recognise the urgency of the climate problem and to act accordingly through additional concrete and effective measures. It agreed to align all relevant policy plans with the climate objectives and to combine them in a climate plan with short-, medium- and long-term policy objectives, the realisation of which will be monitored in the interim.

A sustainable travel policy is considered an important part of this climate plan, since the calculation of the CO_2 footprint of UGent (cf. Bilan Carbone®) [1] shows that 30% of the total CO_2 emissions are allocated to air travel. The share of these trips is in reality even higher: student trips or plane trips that are not booked on UGent budgets (e.g. trips by invitation) are not included.

With the (further) development of a sustainable travel policy, we try to find a balance between two important objectives. On the one hand, there is the need for an academic institution to be internationally active and to exchange knowledge, experience and people. On the other hand, there is the need, again according to the academic world, to take into account the urgency of the climate issue and to act accordingly by drawing up additional concrete and effective guidelines and measures.

In recent years, Ghent University has already laid the foundation of a sustainable travel policy. These first steps, with clear guiding guidelines and broad communication, were - and still are - an example for many higher education institutions, government bodies, organisations and companies.

As a university, we now need to take decisive steps to achieve at least the 55% reduction target (reference year 1990) by 2030 and the EU's goal of carbon neutrality by 2050.

2. EVOLUTION OF MISSIONS AT GHENT UNIVERSITY

2.1 Air travel

Since the framework contract with the travel agency Uniglobe Smart Travel became mandatory in July 2018, information on the destination, route, length of stay, CO_2 emissions and CO_2 contribution of each recorded travel movement has been kept in a more systematic manner. In addition to these registrations, at least 1,020 flights were booked outside the framework contract in 2019. This corresponds to approximately 20% additional flights. The data can be extrapolated on this basis.

It goes without saying that the data from March 2020 onwards are not representative due to the corona crisis. Also, they have not yet been provided by the travel agency (limited operation of the travel agency, many cancellations, postponements, vouchers, etc.).

The limited data set we have at the moment does not yet allow us to draw any conclusions, but the graphs below will form the basis for interesting indicators when monitoring the progress of sustainable travel policies.

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[1] CO_2 footprint UGent, according to Bilan Carbone®. Bilan Carbone® is an international calculation method according to the 'Greenhouse Gas Protocol' and 'ISO14064'.
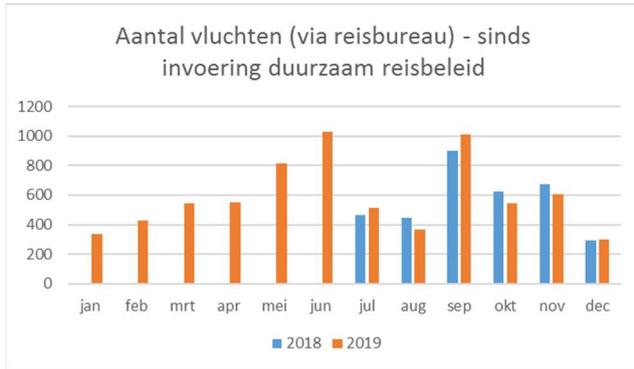
Number of flights since the introduction of the sustainable travel policy, recorded through the framework contract.
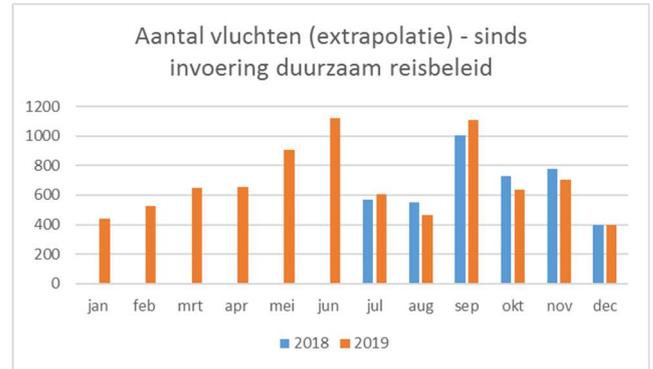

Number of flights since the introduction of the sustainable travel policy, extrapolated to actual number of flights (+20%).
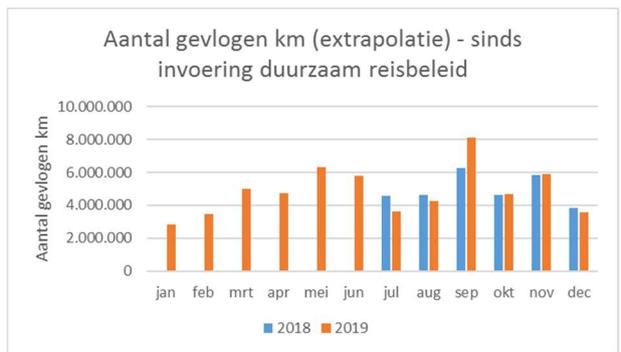
Total number of km flown since the introduction of the sustainable travel policy.
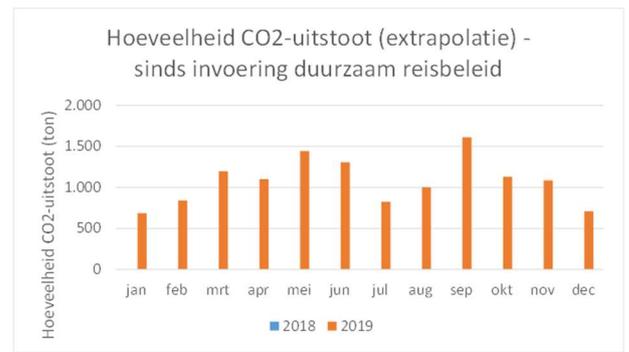
Amount of CO_2 emissions since the introduction of the sustainable travel policy.
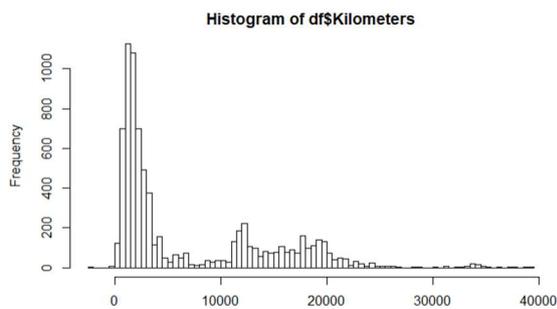
Number of flights compared to the number of return kilometres flown in 2019 (Thesis Sarah Van Acker)
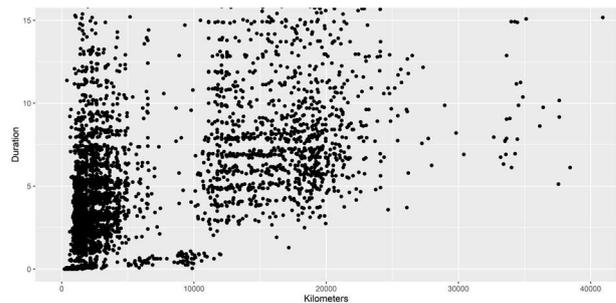
Number of days stayed vs. number of km flown round trip in 2019 (thesis Sarah Van Acker)

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2.2   Train travel - car travel - bus travel

Business trips without using the aircraft account for approximately 1.1% of UGent's total CO2 emissions. These trips, too, will gradually be better registered. However, the fact that this information is not yet available is no obstacle.

3. **OBJECTIVE**

In order to achieve the climate objectives, in line with what is considered scientifically necessary to prevent disastrous climate change, a drastic reduction of CO_2 emissions is needed. Europe states that emissions must be at least 55% lower by 2030 than in the reference year 1990 in order to be climate-neutral by 2050.

Because the different CO2 streams of UGent (building heating and electricity supply, commuting, air travel, ...) each face enormous challenges to reach the 2030 reduction targets, it is proposed to reduce the CO2 emissions of each sub-sector by a proportional amount.

Since air travel at UGent has only been fully registered since July 2018, the reference year used for the UGent calculations is 2019 instead of 1990. Consequently, a recalculation has to be done to determine the reduction targets (science-based targeting). This was done in accordance with ISO14064 by Climate Lab[1], with the result that in 2030 a reduction of 27.5% CO_2 is needed compared to 2019 in order to achieve the European climate objectives (WB2C 'well below 2°C'[2]). If we, as a rich country or knowledge institution, want to take the lead and keep the global temperature increase below 1.5°C, in accordance with scientific insights[3], a 46% reduction in CO_2 by 2030 compared to 2019 is desirable.

When these objectives are projected onto the available data, it is clear that it is not enough to focus only on more sustainable alternatives for nearby destinations; the number of flights within and outside Europe will also have to be reduced significantly (Appendix 1).

However, we must achieve this reduction without jeopardising UGent's mission in terms of education, research and services.

Therefore, the following objectives are proposed:

UGent commits itself to fly less, more thoughtfully and more sustainably, and thus to reduce the CO_2 emissions of its air travel by at least 1/3rd by 2030 in comparison with the reference year 2019.

To this end:

- UGent is working to strike a balance between the need to be internationally active and the need to take account of the urgency of the climate issue; as an institution, it is also weighing in on the ongoing international debate on this issue;
- UGent is shifting 'the standard' towards sustainable mobility, by stimulating sustainable alternatives and putting a brake on unnecessary trips;
- for necessary air travel, a fee is collected to partially compensate for the CO_2 emitted;
- UGent involves expertise and commitment in working on solutions for sustainable mobility.

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[1] *Climate targets UGent - target 2030, according to Bilan Carbone®. Bilan Carbone® is an international calculation method according to the 'Greenhouse Gas Protocol' and 'ISO14064'.*

[2] *WB2C: well below 2°C, limit according to Paris climate agreement*

[3] *WB1.5C: well below 1.5°C, limit in accordance with scientific insights for a rich country and knowledge institution to take the lead and go faster*

In order to achieve these objectives through concrete actions, seven pillars are put forward:

- Data collection and monitoring
- Reflection on the balance between internationalisation and sustainability
- Behaviour change
- Promoting and offering sustainable alternatives to flying
- Steering measures to reduce air travel
- Offsetting CO2 emissions from air travel
- Use of UGent expertise

The action plan below is a first step. It can be supplemented and refined in the course of time, depending on the results achieved.

4. ACTION PLAN

4.1 Data collection and monitoring

With the new framework contract that UGent concluded with Uniglobe Smart travel, a database has been built since July 2018. Every month, separate lists are passed on about the number of flights booked and the amount of CO2 compensated. For each flight, information is also given about the destination, the route and the length of stay. In the future, it is the intention to obtain more aggregated data whereby train journeys linked to flights are also reported in this way, whereby kg of CO2 per flight is visible, the reason for travelling is shown, etc. Direct access to the data would also be easier.

In 2019, at least 1,020 flights were still booked outside the framework contract. This corresponds to approximately 20% additional flights. This makes the database incomplete and results in highly visible errors when, for example, data is broken down by discipline (necessary for Action 6). Therefore, the database needs to be more complete in order to serve as a good indicator.

For train, bus or car journeys, there is no compulsory registration. In order to better monitor the shift towards more sustainable mobility, these data will also be recorded.

The following actions are proposed:

Action 1.	Strive for the most complete data set possible by increasing the use of the framework contract (removal of barriers).
Action 2.	In the new format of expense reports, it will also be requested that for train, car and bus journeys, the destination should be recorded structurally.

4.2 Reflection on the balance between internationalisation and sustainability

In order to operate internationally (which is inherent in the academic business), meeting, dialogue and cooperation are essential in research, teaching and service as well as for university management and cooperation with institutions in the global south. Such activities are based on mutual trust and understanding. A certain degree of physical contact is often important and sometimes even essential (e.g. in a start-up phase of international cooperation or for fieldwork). This inevitably leads to (air) travel and this is not ignored. The

objective is to reduce the number of aeroplane trips - not to abolish them - without neglecting the importance of internationalisation.

But where is the balance? The balance between the need of an academic institution to be internationally active and the need, again according to the academic world, to take into account the urgency of the climate issue and to act on it with additional concrete and effective measures. This requires a global rethinking of the academic culture, whereby foreign travel and thus (long-distance) air travel are given a well-considered place in building a successful international network and academic career and in carrying out activities in the field.

The following actions are proposed:

Action 3.	Active participation in the international debate on internationalisation and sustainability in an academic context (e.g. RoundtableofSustainableAcademicTravel).
Action 4.	Elaborate a UGent-specific framework for sustainable mobility that will be included in the integrated policy plan internationalisation.

4.3   Behaviour change

Communication and awareness raising

In the framework of the sustainability policy of Ghent University, the sustainable travel policy is regularly discussed, e.g. at the welcome days for new staff members, at the faculty councils and sustainability and environmental committees, via the sustainability pact, etc. In this way, the staff is constantly informed about the general guidelines. The current 'standard' is clear. At Ghent University, we do not fly if we do not have to, and certainly not to destinations that can be reached in less than six hours by train ('setting the default'). Moreover, for each flight a CO_2 contribution is collected to finance compensation projects in the South.

At the annual award ceremony for the most outstanding sustainability actions by trade groups, a trade group that goes one step further in sustainable travel policy is also honoured.

In the coming years, departments will also be informed about the CO_2 impact of their air travel by means of a CO_2 dashboard or mobility barometer. By making the objective to be achieved specific for each department, progress can also be monitored at this level. This can lead to a debate within the research groups about the essence of air travel. However, this requires representative data; the corona crisis must be behind us and the share of air travel through framework contracts must be raised.

Taking the lead

With its travel policy, UGent put itself in the spotlight as a 'frontrunner'. The travel policy and the process towards it served as an example for many and a lot of information and experience was passed on: AHS, HOGent, KULeuven, VUB, UA, UHasselt, FWO, Karel de Grote Hogeschool, Thomas More Hogeschool, HOWest, Utrecht University, Maastricht University, University of Groningen, Radboud University, Erasmus University, City of Ghent, Materialise HQ, ... UGent can also continue to play this role.

In addition, at the start of international cooperation, commitments can be made with the partner institutions regarding green mobility (number of physical meetings, agreements on distances and travel times for which it is assumed that the train will be used, CO2 compensation, etc.). A proposal was elaborated in appendix 2. UGent can take the lead in this.

The following actions are proposed:

Action 5.	Develop platform and campaign, to: - highlighting internal ambassadors of a sustainable travel policy; - informing about alternatives (e.g. good websites to book trains) and new policies; - Making cities that can be reached by train within 8 hours visible (see Action 13).
Action 6.	Departments informing about the CO2 impact of their aircraft movements via a CO2 dashboard or mobility barometer with indication of the WB2C and WB1.5C target and annual follow-up.
Action 7.	Take the lead in international partnerships; draw up a charter containing minimum commitments (sample charter in appendix 2).
Action 8.	Take the lead with external funders (cf. VLIR, FWO) to also get those partners (who grant travel budgets to UGent staff) on board (at least the same guidelines as UGent).

4.4   Promoting and offering sustainable alternatives to air travel

Distance conferencing

Various tools are supported by DICT to organise meetings and educational activities online that are now widely known and used due to the corona crisis. The experience that is now being built up must not be lost. There is also a need for further investment and search for more suitable tools, e.g. for organising online and hybrid conferences.

Promoting train travel

Additional measures are needed to make the possibilities of the train better known and expanded, and to make this option more financially attractive (see also Action 5).

The following actions are proposed:

Action 9.	Expanding online conference tools and networking opportunities; organising 'hybrid' conferences (partly physical, partly online); information dissemination.
Action 10.	Providing virtual meeting, education and conference tools for partners and organisations from the Global South to establish long-term cooperation.
Action 11.	Invest in the system of Greenpoints for staff and students, the loyalty programme of SNCB Europe. These Greenpoints can then be used to obtain discounts on subsequent train journeys.
Action 12.	Developing a subsidy system whereby part of the $_{CO2 \text{ contribution}}$ (see action 17) is used for: - subsidy of train ticket - Possible extra night (if needed for train connection)

4.5 Steering measures to reduce air travel

Since the introduction of the sustainable travel policy in 2018, travelling by train is the standard option for destinations that can be reached by train in less than 6 hours ('green cities') or where the travelling time by train is less than or equal to the travelling time by plane [1]. In addition, the train journey is the preferred option for destinations that can be reached by train in less than 8 hours ('orange cities') or where the travel time by train is less than or equal to the travel time by plane.

For offline bookings (via mail), the travel agency stops a booking for a flight to a 'green' city unless an acceptable reason is given (which is fed back to the mobility coordinator). However, for online bookings, it is not technically possible not to show the flight option. After all, these destinations can also be chosen for train or bus trips or for transfer flights to further destinations. However, researchers are informed about the policy choices through a pop-up, and they have to provide a justification if they find it necessary to fly after all.

It is proposed to keep this system, but to shift 'the standard' and to no longer take the plane to destinations that can be reached by train in less than 8 hours. By communicating about this unambiguously and enthusiastically as UGent, a large group will automatically follow. It is expected that this group will gradually increase.

The following actions are proposed:

Action 13.	Changing the 'standard': 'the employee travels by train with a travel time of 8 hours or less'. Deviations are justified in certain cases, e.g. because there are too many transfers, the transfer time is too short, an extra night is needed, you want to be home in time for young children, etc.
Action 14.	Reorient travel budgets of UGent or of other funders (CWO, BOF, MSCA-ITN, Global Minds, European funding, ...) or examine with the funder the possibility of spending these (or the remaining amount) on other research costs (personnel, infrastructure).
Action 15.	Impose clear guidelines on the travel agency (framework contract), e.g: - Good support provided when booking trains and buses; - using the airlines that emit the least amount of emissions on the chosen route (atmosfair airlineindex); - avoiding *creative ticketing* (sometimes it is cheaper to book 2 tickets, leaving 1 seat unoccupied and therefore increasing emissions per passenger kilometre).
Action 16.	With regard to student mobility, a number of steering measures are introduced (in addition to awareness-raising), including : - Provide 'top-up' grants for students wishing to travel sustainably, in the first phase within Erasmus+, in a subsequent phase for all student travel grants; - study trips follow the guidelines of UGent (no plane if the destination can be reached by bus/train/carpooling in less than 8 hours, CO2 contribution according to the CO_2 price on the international market; - No more grants for students moving to a destination outside Europe for less than one month.

4.6 Partially offsetting CO2 emissions from air travel

For the compensation of CO2 emissions Uniglobe Smart Travel works together with CO2Logic. This organisation charges 15 EUR/tonne CO2. Climate projects which the organisation finances

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[1] *Flight time = duration of flight + 2 hours (drive to airport + check-in time + transfer time)*

with the collected budget are monitored by Forum Ethibel, an independent and internationally recognised agency which was appointed by the United Nations for this purpose.

In addition, for flights booked outside the framework contract (e.g. with the professional visa card) a lump sum of EUR 50 was charged for CO2 compensation. These amounts also serve for CO2 compensation.

EUR 80,064.94 has been collected for CO2Logic since July 2018 (through February 2020). An additional EUR 108,000 (until May 2020) was collected via the internal fine system (not yet spent). For a completely 'normal' year 2019, this involved EUR 43,000 collected by CO2Logic and EUR 53,000 collected via the internal fine system.

	Average CO2 contribution (EUR)	Surcharge over ticket price (%)
All flights	21,99	3,83
Flights < 10.000 km	7,69	3,13
Flights > 10,000 km	47,42	5,01

Average compensation amounts at UGent in 2019 (thesis research Sarah Van Acker)

Research[1] shows that the actual CO2 impact is several times higher than 15 EUR/tonne $_{CO2}$ and that this contribution is too limited to lead to a change in behaviour. This transition plan proposes that the CO2 contribution should be equal to the price of CO2 on the international market (Annex 3).

The following actions are proposed:

Action 17.	Equating the CO2 contribution with the price of CO2 on the international market (currently: 50 EUR/tonne CO2), whereby part of it is for:
	- direct CO2 compensation via certified (or well-monitored) afforestation projects or nature restoration projects (from UGent), via BOS+ (CO2 compensation tool 'Treecological') or via CO2-Logic (CO2 compensation tool 'greentripper')
	and with the remainder going to:
	- subsidising international train or bus tickets (via CWO faculty travel budgets), e.g. EUR 30 for ticket price between EUR 100 and EUR 200, EUR 100 subsidy for ticket price > EUR 200
	- the provision for 'living labs', which are set up at UGent as part of the climate plan together with UGent academics and policy staff (allocation takes place on the advice of the sustainability committee)
	For flights booked outside the framework contract, the CO2 contribution will be additionally collected by UGent, with fixed amounts (based on average CO2 emissions for a flight to a particular continent).

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[1] *https://lib.ugent.be/nl/catalog/rug01:002785259, https://gwagner.com/true-carbon-price/; The economics of climate change by Nicolas Stern; Revisiting the social cost of carbon by Nordhaus; The social cost of carbon with economic and climate risks by Cai and Lontzek; The social cost of carbon revisited by Pindyck, ...*

4.7 Deployment of UGent expertise and commitment

The mobility transition still requires a lot of innovation. As a university, we can investigate which technical, regulatory, administrative, financial and emotional barriers hinder innovation and how these can be removed.

Our own experts can help in the concrete translation of this plan, e.g. by working on solutions to improve international train traffic, to make aviation greener, to compensate for CO_2, to reconcile internationalisation and sustainability in education and research institutions, ... We need to connect the available expertise to create a strong partnership.

The following collaborations have been or are being set up:

Development of a dynamic platform that shows the possibilities of more sustainable transport modes for different travel destinations, with extra information on travel time, CO_2 impact, comfort, experiences of UGent employees, ...
Cooperation with fac. WE, Department of Geography
Look for possibilities of direct CO2 compensation through certified (or well-monitored) afforestation projects or nature restoration projects of UGent.
Cooperation with fac. BW and BOS+
Make improvement proposals to SNCB in order to increase international train traffic.
Cooperation with Green Offices of Flemish Universities and fac. WE, Department of Geography
Master's thesis How to reduce the carbon cost of academic air travel? A quantitative analysis of the air travel behaviour at Ghent University.
Sarah Van Acker, 2020, Master in Economics, promotor: Brent Bleys
Master's thesis Evaluating the CO2 contributionof air travel at Ghent University.
Irene Govaert, 2019, Master of Science in Environmental Remediation and Management, supervisor: Brent Bleys
Master's thesis Travel in an institutional gap: Can UGent take the lead in a sustainable travel policy?
Mieke Burrick, 2018, Master of Science in Business Economics, supervisor: Brent Bleys

With input from: Internationalisation, DOZA, Department of Environment, Committee on Sustainability, faculty research directors, Interfaculty Resonance Group on Internationalisation (IFRI), Committee on Development Cooperation, faculties, Transition UGent, experts Sil Lanckriet (department of Geography, climate change) Frank Witlox, Tom Storme and Freke Caset (Department of Geography, transport geography), Thijs Vandenbroecke (Department of Geology), Adinda Van Gaalen (Department of Social Sciences), Brent Bleys, Marten Ovaere and Jonas Van der Slycken (Department of Economics, environmental economics), Climate Lab, BOS+

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ANNEX 1: ANALYSIS OF FLIGHT DATA 2019 AND PROJECTION OF TARGETS

	TOTAAL (op basis van data Uniglobe Smart Travel 2019)			FRACTIE BINNEN EU			PROJECTIE: stel geen vluchten meer binnen EU		
	Aantal vluchten	CO2-emission (ton) met RF	Afstand (km)	Aantal vluchten	CO2-emissies (ton) met RF	Afstand (km)	CO2-emissies (ton) (CO2-emissies van vluchten binnen EU = 0)	WB2C: verdere daling nodig tot:	WB1.5C: verdere daling nodig tot:
					% van totaal	*% van totaal*			
totaal	12.668	9.003	38.350.239	7.381 *58*	1.568 *17*	6.030.184	7.435	6.527	4.862

ANNEX 2: EXAMPLE OF CHARTER FOR INTER-NATIONAL COOPERATION

As research institutions, we are well aware about the urgency of the climate crisis and are motivated to act on it with specific and effective measures that reduce our CO2-emissions, to eventually be CO2-neutral as soon as possible. However, due to the strong international focus of universities, the CO2-footprint is strongly determined by air travel. Therefore, we should take immediate action to reduce the amount of flights, especially because no groundbreaking technological advancements for sustainable flying are to be expected in the upcoming decade.

With this sustainable travel charter, we are seeking a balance between sustaining a dynamic, effective, and international platform on the one hand and acting on the urgency of the climate crisis additional concrete and effective measures on the other hand.

We commit ourselves to:

Reducing physical meetings

Every task force meets physically maximum once a year. Other meetings will be held online.

Traveling by train/bus/car to places that are accessible with an eight hour train/bus ride

The travel time is calculated on the basis of the distance from the employee's place of employment to their destination.

Specific for our project, it means that following trips can be done by train:

- Ghent University - University of Groningen: travel time 4h 45min, 2 transfers (train)

- Ghent University - University of Bordeaux: travel time 5h 30min, 3 transfers (train)

- University of the Basque Country - University of Bordeaux: travel time 5h 30min, 3 transfers (train, bus)

- University of Groningen - University of Göttingen: travel time 5h 12 min, 2 transfers (train)

- University of Ghent - University of Göttingen: travel time 6h 26 min, 4 transfers (train)

If the travel time by train/bus is more than eight hours, the participant may also opt to travel by train/bus and will be reimbursed.

Compensating the price of CO_2 of our travel by air

Every business trip by plane will be compensated for at least the price of CO_2 on the international market. Every institution can choose out of these options:

- Direct CO2 compensation by a certified organisation
- Subsidies for train or bus tickets
- Living labs at the own university in the framework of the Climate Lab

APPENDIX 3: ESTIMATE OF CO2 CONTRIBUTION AND ALLOCATION

For a completely 'normal' year 2019, EUR 43,000 was collected by CO2-Logic (15 EUR/tonne) and EUR 53,000 via the internal penalty system (50 EUR/flight).

It is estimated that the amount collected will be approximately EUR 180 000 (EUR 50 instead of EUR 15, but fewer penalties due to better use of the framework contract).

Of this, a similar proportion (about EUR 60,000) flows to projects for direct and highly effective CO2 compensation.

Part of it goes to subsidising train tickets (based on the data for 2018 and 2019, this would amount to about EUR 50,000 (see table).

	2018	2019
Total # of train journeys	17.232	17.841
# train journeys at a cost of EUR 100-200	756	723
# rail journeys with a cost > EUR 200	275	265
Suppose EUR 30 subsidy between EUR 100 and EUR 200 and EUR 100 subsidy from EUR 200	EUR 50 180	EUR 48 190

The remaining amount goes to a provision for living labs within the framework of the climate plan.